

## MINOR NOTICES

**Plankton studies.**—HANS BACHMANN<sup>2</sup> has issued a volume that combines his studies on Lake Lucerne and other Swiss lakes with a general account of the plant plankton of fresh water. The author follows SCHRÖTER in limiting the use of the term plankton to those organisms whose own locomotion is powerless to drive them against waves and currents. A contrast is made between the plankton of lakes (limnoplankton), small ponds (heleoplankton), and rivers (potamoplankton). Following chapters on plankton technique and the physical constitution of the water is a chapter, making up the body of the volume, dealing with the plankton constituents. The groups treated are the flagellates, Peridineae, diatoms, Cyanophyceae, desmids, Protococcaceae, and Volvocaceae. Owing to the minute descriptions, taking account of both ordinary forms and variations, and ample keys, this work will be of great value to all students of the phytoplankton. It will be of particular value as a manual for the identification of many of our common fresh water forms.—H. C. COWLES.

**Flora of India.**—The government of Madras has published a flora of a region of India prepared by Professor FYSON<sup>3</sup> of Presidency College. The plants included are the wild and more commonly introduced flowering plants in the neighborhood of the hill-stations of Ootacamund, Kotagiri, and Kodaikanal. Nearly 500 species are described, 430 of which are indigenous, and nearly half of these are restricted to the mountains of South India and Ceylon. Only 40 of them occur in China and Japan. The analytical keys, the remarkably full descriptions, and the volume of illustrations make this manual exceedingly serviceable to botanical students in a special region of India, and also to botanists everywhere who are interested in the composition of the Indian flora.—J. M. C.

**Fresh water flora of Germany, Austria, and Switzerland.**—This very compact and well illustrated manual of the fresh water flora of this region, under the editorship of PASCHER, is planned to appear in 16 small volumes, 7 of which have been published and noticed in this journal. The eighth volume to appear (volume 5 of the series)<sup>4</sup> deals with Tetrasporales and Protococcales of the Chlorophyceae, and is prepared by E. LEMMERMANN (Bremen), JOS. BRUNNTHALER (Wien), and A. PASCHER (Prag).—J. M. C.

<sup>2</sup> BACHMANN, HANS, *Das Phytoplankton des Süßwassers mit besonderer Berücksichtigung des Vierwaldstättersees*. 8vo. pp. 213. *figs.* 29. *pls.* 15. Jena: Gustav Fischer. 1911. \$1.25.

<sup>3</sup> FYSON, P. F., *The flora of the Nilgiri and Pulney hill-tops (above 6500 feet)*. 2 vols. 8vo. Vol. I. pp. xxvi+475; Vol. II. *pls.* 286. Madras: Government Press. 15s.

<sup>4</sup> PASCHER, A., *Die Süßwasser-Flora, Deutschlands, Österreichs, und der Schweiz*. Vol. V. Chlorophyceae 2 (Tetrasporales, Protococcales). pp. 250. *figs.* 402. Jena: Gustav Fischer. 1915.